

In the claims:

Please cancel claims 30-33, 45 and 46 without prejudice or disclaimer.

Please amend the claims as follows (note that all pending claims are printed for the Examiner's convenience):

26. (amended) An interface device capable of communicating with a computer running an interactive computer application and generating a graphic image, the interface device comprising:

a peripheral device in communication with the computer and capable of being translated linearly in three dimensions by a user, the peripheral device [comprising a force applying element] adapted to apply a force to the user, the peripheral device [force applying element] comprising a member [surface] adapted to contact the user and a link coupled to the member [surface], and

a sensor coupled to the peripheral device to detect a position of at least a portion of the peripheral device to control the graphic image, the sensor comprising an encoder,

wherein the peripheral device [force applying element] applies a force to the user based on the interaction of the graphic [graphical] image with a graphic [graphical] object.

27. An interface device according to claim 26 wherein the encoder is an optical encoder.

28. An interface device according to claim 26 wherein the peripheral device is capable of being moved in six degrees of freedom.

29. (amended) An interface device according to claim 26 further comprising a cable connected to the link for forcing the member [force applying element].

34. (amended) An interface device capable of communicating with a computer running an interactive computer application and generating a graphic image, the interface device comprising:

a peripheral device in communication with the computer and capable of being manipulated [translated linearly] by a user, the peripheral device [comprising a force applying element] adapted to apply a force to the user; and

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a sensor coupled to the peripheral device to detect a position of at least a portion of the peripheral device to control the graphic image,

wherein the peripheral device [force applying element] comprises a surface adapted to contact a portion of the user and a forcing member coupled to the surface, the forcing member comprising a flexible member and a link having a joint, and wherein the forcing member is coupled to a force activator adapted to provide a force to the forcing member based on the interaction of the graphic [graphical] image with a graphic [graphical] object.

35. An interface device according to claim 34 wherein the flexible member is a cable.

36. An interface device according to claim 34 wherein the force activator is a motor.

37. An interface device according to claim 34 wherein the sensor comprises an encoder.

38. (amended) An interface device capable of communicating with a computer running an interactive computer application and generating a graphic image, the interface device comprising:

a peripheral device in communication with the computer and capable of being manipulated [translated linearly] by a user, the peripheral device [comprising a force applying element] adapted to apply a force to the user; and

a sensor coupled to the peripheral device to detect a position of at least a portion of the peripheral device to control the graphic image,

wherein the peripheral device [force applying element] comprises a member adapted to selectively contact [applies a force to] the user based on the interaction of the graphic [graphical] image with a graphic [graphical] object to simulate a texture of the graphic [graphical] object.

39. (amended) An interface device according to claim 38 wherein the peripheral device [force applying element] is adapted to contact a [apply a force to the] finger.

40. An interface device according to claim 26 wherein the link comprises a five-bar linkage.

G2  
P2  
41. An interface device according to claim 40 wherein one of the bars of the five-bar linkage is a grounded link.

42. (amended) An interface device according to claim 26 wherein the peripheral device [force applying element] is coupled to a force activator remote from the member adapted to contact a user [surface].

43. (amended) An interface device according to claim 29 [26] further comprising a spring for tensioning the cable.

44. An interface device according to claim 29 wherein the link comprises a joint and wherein the cable is connected to the link on one side of the joint and further comprising a second cable connected to the link on the opposite side of the joint.

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47. An interface device according to claim 34 wherein the forcing member further comprises a second flexible member and wherein the first and second flexible members are coupled to the link on opposite sides of the joint.

48. An interface device according to claim 47 wherein the force activator selectively applies tension to one or more of the flexible members to cause rotation of the link about the joint.

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49. An interface device according to claim 34 wherein the force activator is remote from the surface and wherein the forcing member is routed from the force activator to the surface.

50. An interface device according to claim 34 further comprising a spring for tensioning the flexible member.

51. An interface device according to claim 34 wherein the peripheral device is capable of being translated in three dimensions.

52. An interface device according to claim 34 wherein the peripheral device is capable of being moved in six degrees of freedom.

Please add the following new claims:

F5 53. An interface device capable of communicating with a computer running an interactive computer application and generating a graphic image and a graphic object comprising a simulated button, the interface device comprising:

a peripheral device in communication with the computer and capable of being manipulated by a user, the peripheral device adapted to apply a force to the user; and

a sensor coupled to the peripheral device to detect a position of at least a portion of the peripheral device to control the graphic image,

wherein the peripheral device provides a force sensation to the user based on the interaction of the graphic image with the simulated button.

54. An interface device according to claim 53 wherein the force sensation comprises a force opposing depression of the simulated button.

55. An interface device according to claim 54 wherein the simulated button comprises a toggle point and wherein the peripheral device is adapted to cause release of the force opposing depression of the simulated button when the toggle point has been reached.

56. An interface device according to claim 53 wherein the force sensation comprises a click.

57. An interface device according to claim 53 wherein the simulated button has a simulated toggle point.

58. An interface device according to claim 53 wherein the force sensation comprises a click that is provided to the user when the simulated button reaches a simulated toggle point.